



# **Introduction to Systematic Reviews**

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Conference on Program Evaluation  
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George C. Marshall Center**



# Why systematic reviews?



**THE COCHRANE  
COLLABORATION®**



# Why systematic reviews?

- Deworming increased school participation by at least 7 percentage points, which equates to a one-quarter reduction in school absenteeism. *Miguel & Kremer 2004*
- Deworming drugs used in targeted community programmes may be effective in relation to weight gain in some circumstances but not in others. No effect on cognition or school performance has been demonstrated. *Taylor-Robinson, Jones & Garner 2008*



# Workshop objectives

- Participants will
  - Understand the advantages of a systematic review
  - Learn the basic features of a systematic review
  - Practice writing the primary input for commissioning a systematic review
  - Be familiar with one systematic review



# Outline of workshop

- Why systematic reviews?
- What is a systematic review?
- What makes it systematic?
- How to commission a systematic review
- Evaluation question practice
- Systematic review on social cohesion



# What is a systematic review?

Systematic reviews consolidate and synthesize the evidence from impact evaluations to make the findings accessible and useful to policy makers and program managers.

“We do the work so you don’t have to!”



# What is an impact evaluation?

High-quality impact evaluations measure the net change in outcomes that can be attributed to a specific program, or intervention. Impact evaluations examine what works, what does not, and why.



# What makes it systematic?

- The search
- The selection
- The analysis



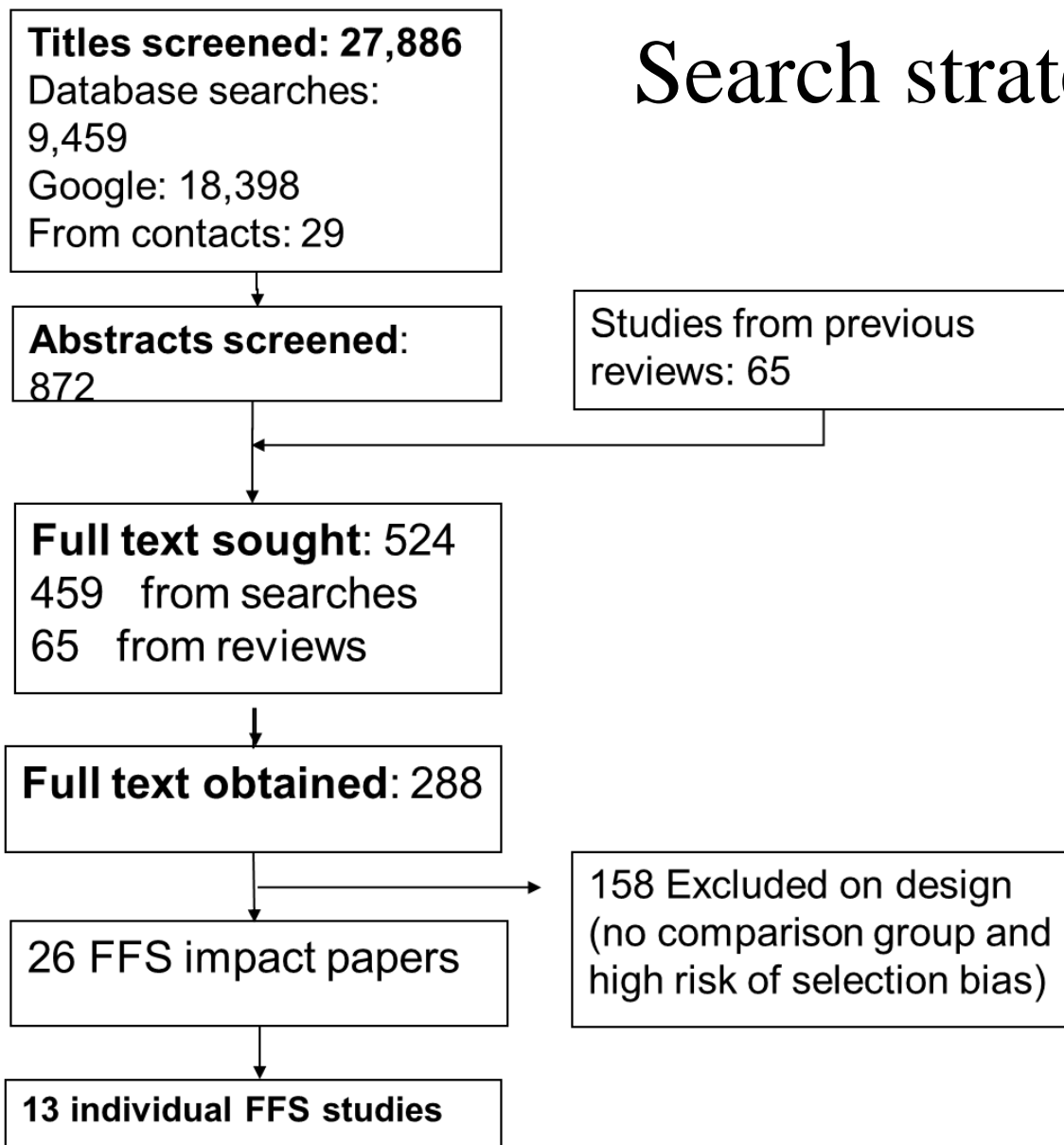


# Systematic: the search

- Studies, or evaluations, are the unit of analysis
- Start by identifying the *population* of studies according to a search strategy
- Search for both published and unpublished studies



# Search strategy





# Systematic: the selection

- Studies from the population are very deliberately chosen to be included in the systematic review.
- Studies are coded for relevance—inclusion criteria.
- Studies are coded for quality—risk of bias.
- Two people code the studies; a third helps to select.
- Selection based on both inclusion criteria and risk of bias.



# Coding sheet

**Table 4.3** Example Coding Sheet for Study Setting Characteristics in a Homework Synthesis

<i>Setting Characteristics</i>	
<p>S1. Were the participants: (Place a 1 in each column that applies, 0 if not, ? if not reported.)</p> <p>a. In the United States</p> <p>b. In a country other than the United States (specify country) _____</p>	<p>—</p> <p>—</p>
S2. What state was the study conducted in? (Use postal codes.)	—
<p>S3. What type of community was the study conducted in?</p> <p>1 = Urban</p> <p>2 = Suburban</p> <p>3 = Rural</p> <p>? = Can't tell</p>	—
<p>S4. What type of school was the study conducted in?</p> <p>1 = Public school</p> <p>2 = Private school</p> <p>3 = Private school with a religious affiliation (specify religious group) _____</p> <p>? = Can't tell</p>	—
<p>S5. What classroom types were represented among the settings? (Place a 1 in each column that applies, 0 if not, ? if not reported.)</p> <p>a. Regular education</p> <p>b. Special education</p> <p>c. Other (specify) _____</p> <p>d. No classroom types given</p>	<p>—</p> <p>—</p> <p>—</p> <p>—</p>



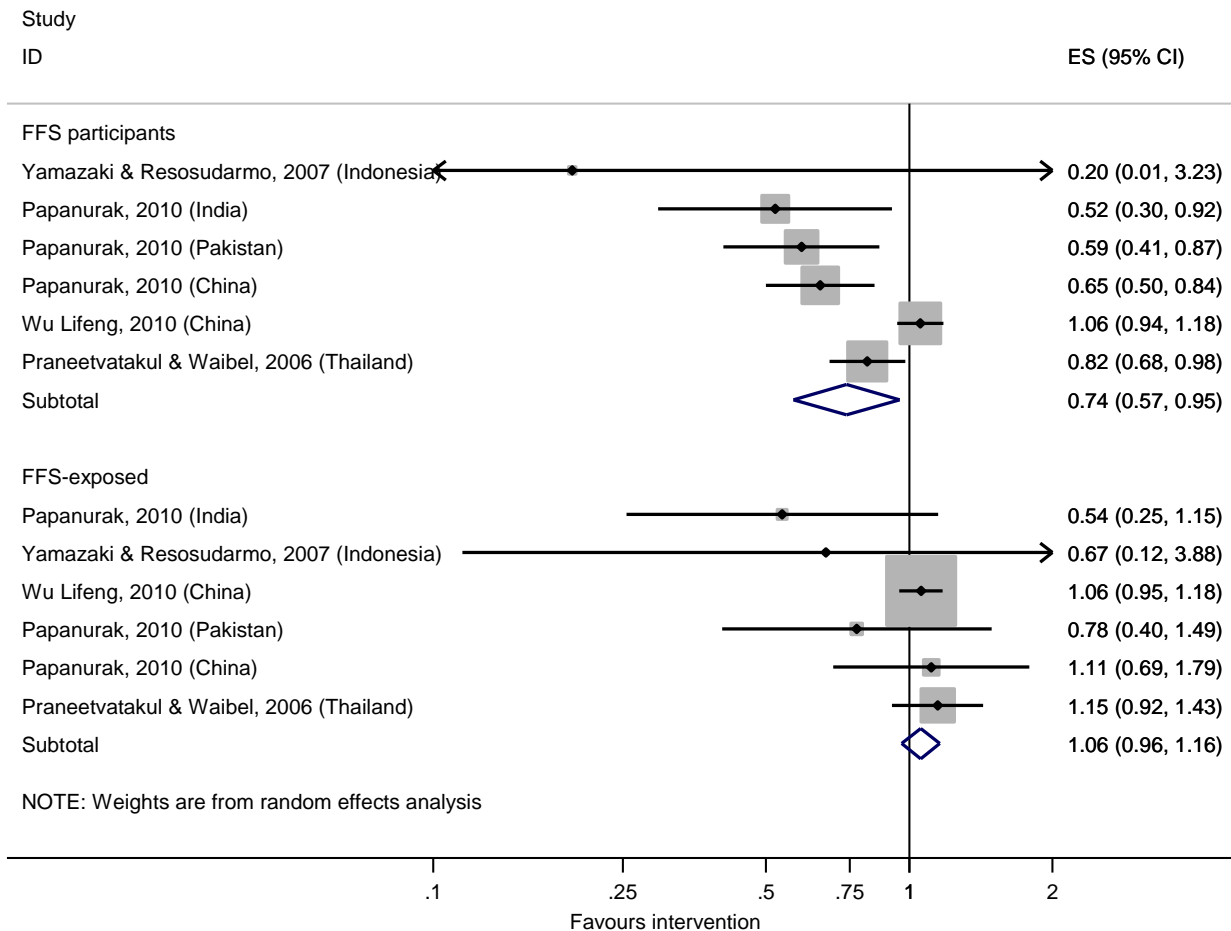
# Systematic: the analysis

- At the most basic level, combining like with like.
  - Are the interventions similar?
  - Are the outcomes that are measured similar?
- Quantitative synthesis using meta-analysis
- Qualitative synthesis using one or more of several methodologies



# Meta-analysis: forest plot

Adoption outcomes measured with pesticide costs





# Qualitative synthesis methods

Method	Description
<i>Quantitative approaches – content analysis</i>	Data categorised and frequency of each theme determined to identify key findings. Categories and themes identified a priori.
<i>Narrative synthesis:</i>	Narrative, interpretive approach. Summarise, compare and contrast findings from different studies. Guidance on narrative synthesis includes a range of different tools and techniques, including tabulations, case summaries and thematic analysis.
<i>Thematic synthesis</i>	Identify main themes emerging from the literature. Synthesis of findings organised around these key themes and concepts. Can incorporate both quantitative and qualitative findings. Themes are sometimes counted and displayed in tables.
<i>Realist synthesis</i>	Theory driven approach, focused on the underlying program theory and mechanisms driving an intervention. Allows the inclusion of a wide range of evidence, from experimental evaluations to newspaper reports.
<i>Meta-ethnography</i>	Key themes, concepts and metaphors identified in the primary studies. Three types of synthesis: (1) Translate themes across studies (reciprocal translation); (2) Identify, characterise and explain contradictory findings (refutational synthesis); (3) Use findings to develop a general interpretation (lines-of-argument synthesis)



# How to commission a systematic review

- Cochrane review standards  
[www.cochrane.org/training/cochrane-handbook](http://www.cochrane.org/training/cochrane-handbook)
  - Registry
  - Protocol
- Write the evaluation question
- Review the protocol





# The protocol

- Register with the International Development Coordinating Group of the Campbell Collaboration  
[www.campbellcollaboration.org/international\\_development](http://www.campbellcollaboration.org/international_development)
- Outline
  - Protocol information
  - Background
  - Objectives
  - Methods



# Evaluation question

- Participants
- Interventions
- Comparisons
- Outcomes



# Real examples

- What is the impact of ICT provision, such as mobile phones, laptops and community-based computer access, in rural areas?
- How effective are demobilisation and reintegration programmes?
- What forms of partnership between non state (including customary, traditional and community-based) and state justice systems are effective in improving justice and security services to the poor and particularly women?



# Exercise

- Get into groups of 3 – 5 people
- Identify an issue for an evaluation question relevant to USG programming
- Formulate an SR evaluation question using PICO
- Write down the evaluation question for sharing with the whole group.
- 5-10 minutes



# **INTERVENTIONS TO PROMOTE SOCIAL COHESION IN SUB- SAHARAN AFRICA**

Elisabeth King, Cyrus Samii, and Birte  
Snilsveit, July 2010





# SR of Social Cohesion Interventions

- Research shows “social cohesion” and “social capital” are important pre-conditions for economic growth.
- As a policy-maker, we want to know *whether short- or medium-term interventions are available that really increase social cohesion & a society’s economic growth potential.*



# SR of Social Cohesion Interventions

- Many interventions undertaken with aim of increasing social cohesion:
  - Community driven development (CDD)
  - Curriculum interventions
- We focus on *the impact of CDD interventions on social cohesion*.
- TOC: *social cohesion is a by-product of community participation in setting development goals*.







# Synthesizing Impact Estimates

**Table 4 Synthesis of effect estimates from CDD interventions**

		Study	Chase and Sherburne-Benz	Fearon et al	Gugerty and Kremer	Gugerty and Kremer	OED (2005)	Vajja and White; OED (2002)	Vajja and White; OED (2002)							
		Intervention	ZAMSIF (I)	Lofa-CDD	ICS Block Grants	ICS Womens Group	CDD-Benin	MASAF	ZAMSIF (II)							
		Country	Zambia	Liberia	Kenya	Kenya	Benin	Malawi	Zambia							
Measure category	Outcomes	Effect estimates [I]								Synthesis [II]			Hom. [III]			
	<i>Likelihood that an individual...</i>	b	se	b	se	b	se	b	se	b	se(B)	B/se(B)	p-value			
Participation	Believes participation in group activities is easy/easier.							-0.29	0.18	0.22	0.14	0.03	0.11	0.25	0.03	
	Is aware of/participates in community meeting/non-traditional event to address general problems.			0.21	0.13	0.05	0.08	-0.16	0.33	0.08	0.12			0.08	0.06	1.42

- No compelling evidence of community-level pro-social cohesion effects.
- Three studies found negative effects on inter-community relations.



# Examining Mechanisms

- Flaws in implementation or in the TOC?
- A bit of both:
  - Beneficiaries' understanding of projects low.
  - Broad, substantive participation lacking.
  - No development of problem-solving capacities.
  - Projects did succeed in delivering valued goods though.



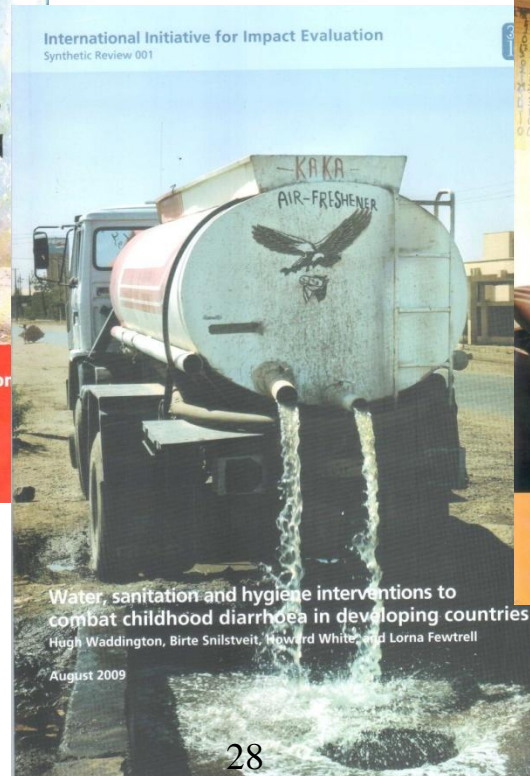
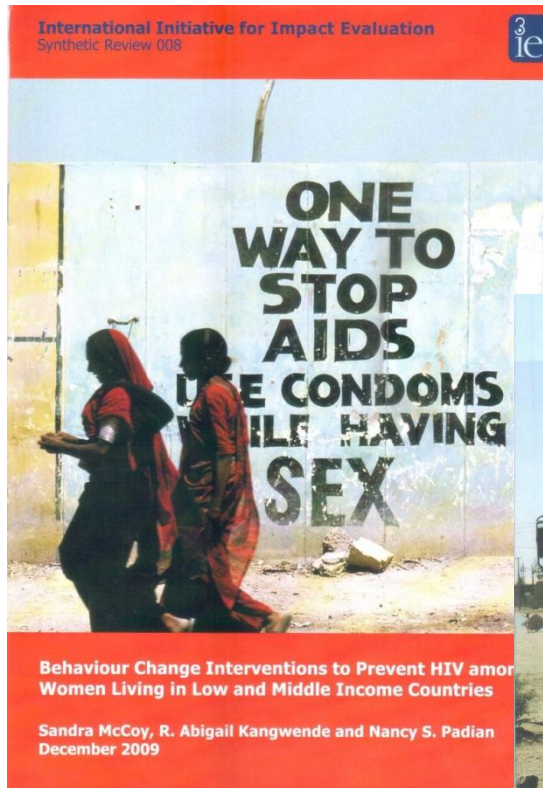
# Implications

- CDD may serve useful purposes (e.g. decentralization), but generation of social cohesion does not seem to be one of them.
- For the policy maker interested in social cohesion, consider RCTs of other kinds of interventions – e.g. community training programs or social events programs.



# 3ie's systematic reviews

[www.3ieimpact.org/systematicreviews](http://www.3ieimpact.org/systematicreviews)





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